

What is claimed is:

1. An optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and a protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film, and at least either one of a linear expansion coefficient and a Young's modulus of the protective film is greater than that of the transparent substrate, the linear expansion coefficient of the protective film being greater than 7.0×10^{-5} ($1/^{\circ}\text{C}$) and smaller than 5.0×10^{-4} ($1/^{\circ}\text{C}$).
2. An optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and a protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film, and at least either one of a linear expansion coefficient and a Young's modulus of the protective film is greater than that of the transparent substrate, the Young's modulus of the protective

film being greater than 2.0×10^9 (Pa) and smaller than 1.0×10^{10} (Pa).

3. An optical data recording medium according to any
5 one of claims 1 and 2, wherein a thickness of the protective film is 5 μm or more to 20 μm or less.

4. An optical data recording medium according to claim 1,
10 wherein the linear expansion coefficient of the protective film is 1.5 to 3 times as great as that of the transparent substrate, the linear expansion coefficient being greater than 1.0×10^{-4} ($1/^\circ\text{C}$) and smaller than 2.0×10^{-4} ($1/^\circ\text{C}$).

5. An optical data recording medium according to any
15 one of claims 1 and 2, wherein the transparent substrate is made of a polycarbonate or a polyolefin and a thickness thereof is about 0.5 mm.

6. An optical data recording medium according to any
20 one of claims 1 and 2, wherein the protective film is made of an ultraviolet light curing resin.

7. A method of selecting a protective film in an optical data recording medium, the optical data recording medium
25 comprising a transparent substrate, a thin film layer formed on

the transparent substrate and the protective film which is
mainly comprised of a resin and formed on the thin film layer
for protecting the thin film layer, wherein, on condition that
the thin film layer is a single layered or multilayered film
5 including at least any one of a dielectric film, a recording film
and a reflective film and the transparent substrate is made of a
polycarbonate or a polyolefin with a thickness of 0.5 mm, the
protective film is selected such that at least either one of a
linear expansion coefficient and a Young's modulus of the
10 protective film is greater than that of the transparent substrate
and the linear expansion coefficient of the protective film is
greater than 7.0×10^{-5} (1/°C) and smaller than 5.0×10^{-4} (1/°C).

8. A method of selecting a protective film in an optical
15 data recording medium, the optical data recording medium
comprising a transparent substrate, a thin film layer formed on
the transparent substrate and the protective film which is
mainly comprised of a resin and formed on the thin film layer
for protecting the thin film layer, wherein, on condition that
20 the thin film layer is a single layered or multilayered film
including at least any one of a dielectric film, a recording film
and a reflective film and the transparent substrate is made of a
polycarbonate or a polyolefin with a thickness of 0.5 mm, the
protective film is selected such that at least either one of a
25 linear expansion coefficient and a Young's modulus of the

protective film is greater than that of the transparent substrate and the Young's modulus of the protective film is greater than $2.0 \times 10^9(\text{Pa})$ and smaller than $1.0 \times 10^{10}(\text{Pa})$.

- 5 9. An optical data recording medium provided with a protective film for protecting a thin film layer selected by the method of claim 7 or 8.

10002949 444504